NWS FORM E-5 (11-88) **(PRES. by NWS Instruction 10-924)** **U.S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION NATIONAL WEATHER SERVICE**	HYDROLOGIC SERVICE AREA (HSA) **WFO Jackson, Mississippi**
MONTHLY REPORT OF HYDROLOGIC CONDITIONS	REPORT FOR: MONTH **October** YEAR **2016**
TO: Hydrometeorological Information Center, W/OH2 NOAA / National Weather Service 1325 East West Highway, Room 7230 Silver Spring, MD 20910-3283	SIGNATURE **Bill Parker, Meteorologist In-Charge** DATE **11/22/16**

When no flooding occurs, include miscellaneous river conditions, such as significant rises, record low stages, ice conditions, snow cover, droughts, and hydrologic products issued (NWS Instruction 10-924)

X **An X inside this box indicates that no river flooding occurred within this Hydrologic Service Area.**

Synopsis…

The most notable feature of this October was the lack of rain. The Meridian and Vicksburg climate sites both received only a trace amount of rainfall throughout the entire month, which in turn gave them the rankings for driest Octobers on record. Greenwood received the most rainfall within the HSA (Hydrologic Service Area) with a whopping 0.82 inches total. Each site except for Jackson (with 0.49 inches) ranked in the top 10 driest Octobers. With the lack of rain came the above normal temperatures, though. Each climate site in the HSA ranked within the top 10 warmest Octobers on record.

Weather Highlights…

The lack of rain made for a pretty boring weather month overall, besides the drought and fire weather aspects. High pressure dominated the pattern over the East and Southeast for the majority of the month. The first weather system passed through the HSA on the 7th. It was a cold front which managed to drop temperatures closer to normal but did nothing to relieve the drought. No rainfall was produced in the entire region. After the front moved off to the east, high pressure settled in again over the eastern third of the country.

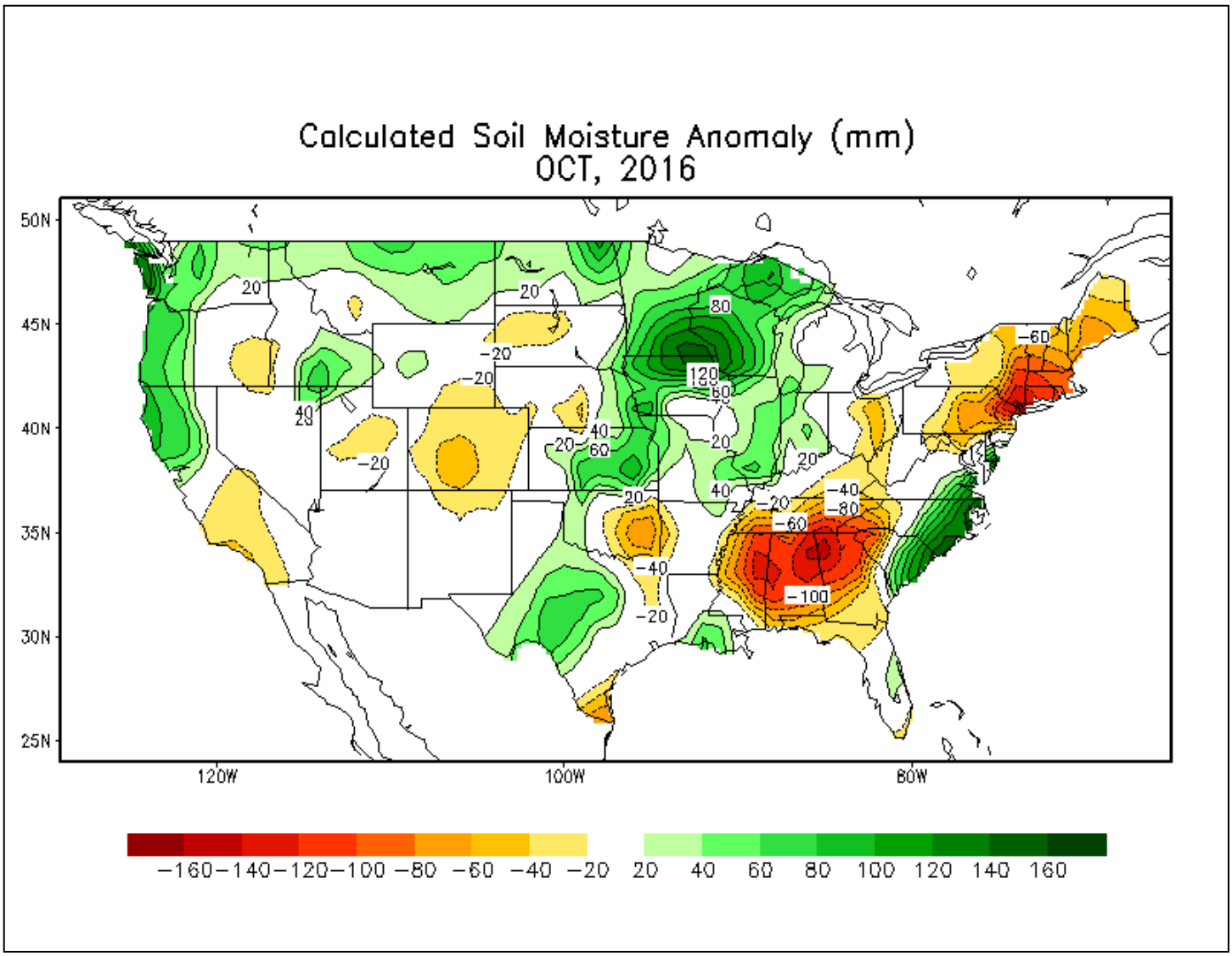
The next cold front approached the HSA from the northwest on the 14th. This front managed to bring a tenth of an inch of rain to Greenville and about the same to Greenwood, but washed out before bringing any other relief to the rest of the HSA.

The first “significant” rainmaker came in the form of a cold front on the 19th and 20th. This front brought scattered showers to the HSA. The heaviest showers yielded one half to three-quarters of an inch for isolated locations. There were still locations within the HSA that did not receive any rainfall with this system though.

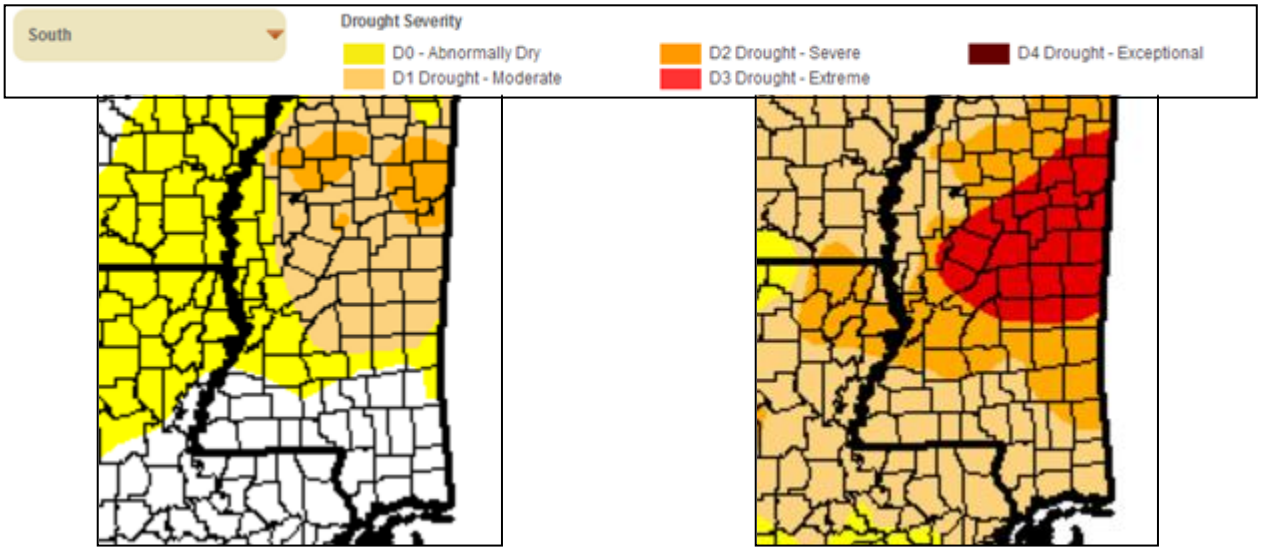
Once the last front passed through, temperatures dropped closer to seasonal normal but were still five to 10 degrees above average. There were a few other fronts that approached the HSA throughout the month but would wash out before passing through the South. The abundance of dry air over the region made it difficult for systems to push very far south.

River and Soil Conditions

Soil Moisture Map:

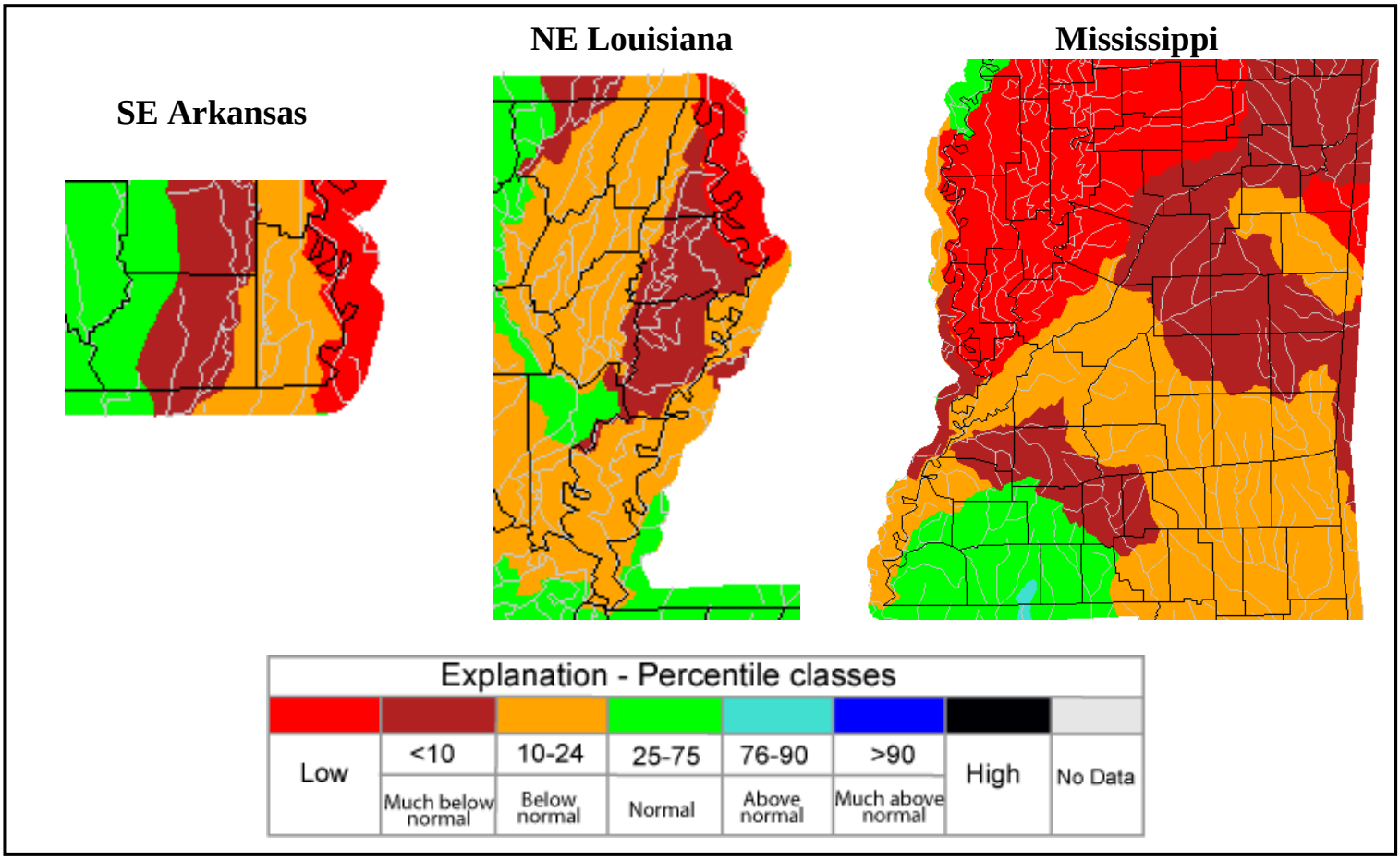


Drought Comparison:



October 1, 2016 **November 1, 2016**

Streamflow:
The United States Geological Survey's (USGS) October 2016 river streamflow records were compared with all historical October streamflow records. Normal streamflow was only seen in the Homochitto basin in southwestern Mississippi and along the Ouachita River basin in southeast Arkansas and northeast Louisiana. Below normal streamflow was seen everywhere else in the HSA. Extremely low streamflow was seen on the Mississippi River basin north of Vicksburg and on all river basins within the Mississippi Delta.

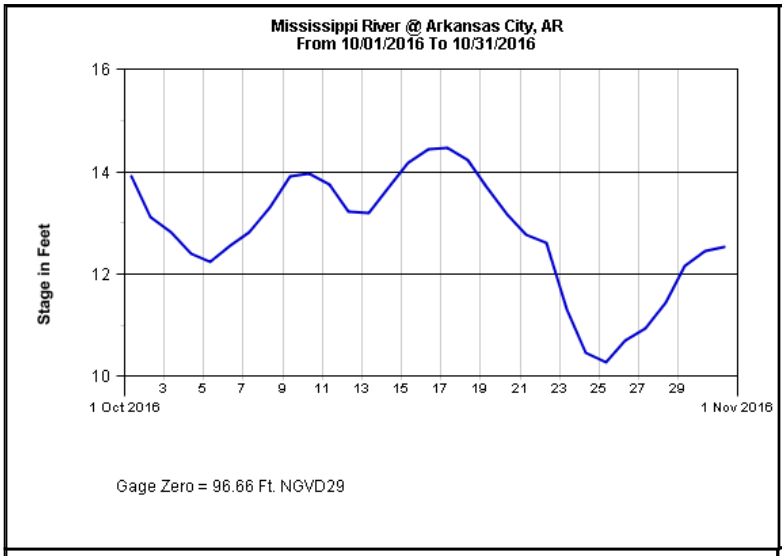


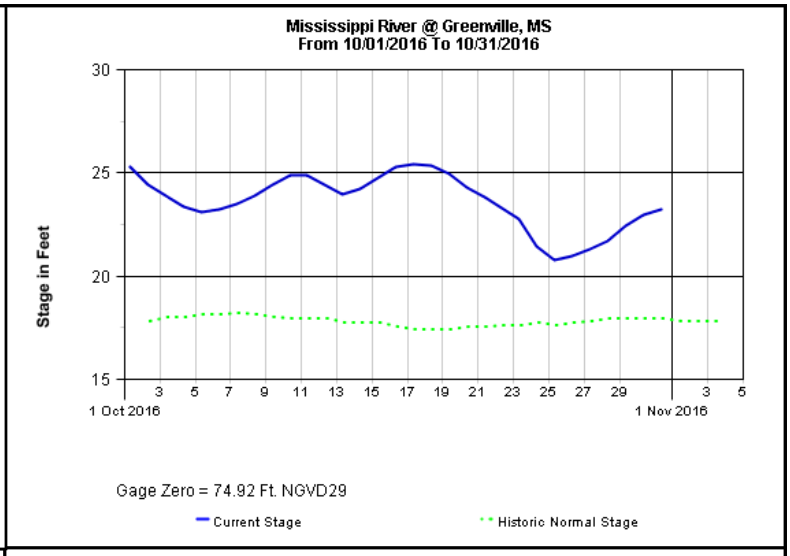
River Conditions:
There was no river flooding during the month of October.

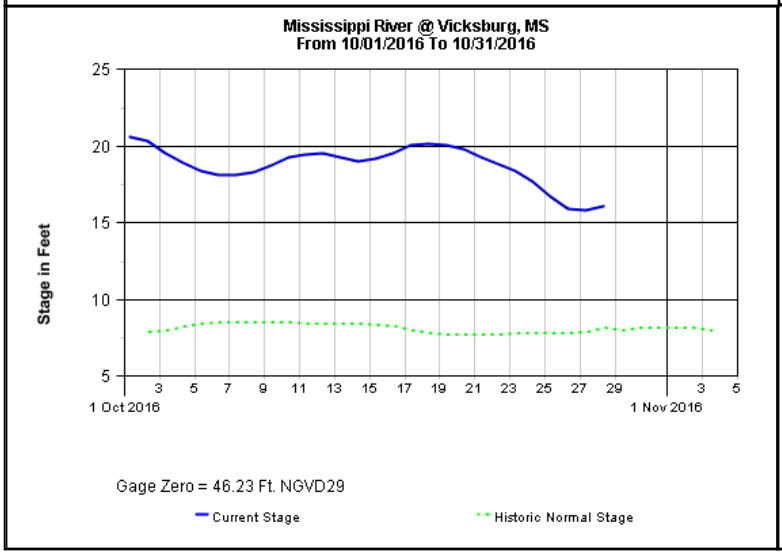
Climatic Outlook and Flood Potential:
The climatic outlook shows good chances for above normal temperatures over the next three months for the whole HSA. In regards to precipitation, the outlook indicates good chances for below normal precipitation throughout the entire HSA. Thus, based on current soil moisture, streamflow, and the 3-month climate outlook, the flood potentials are thus:

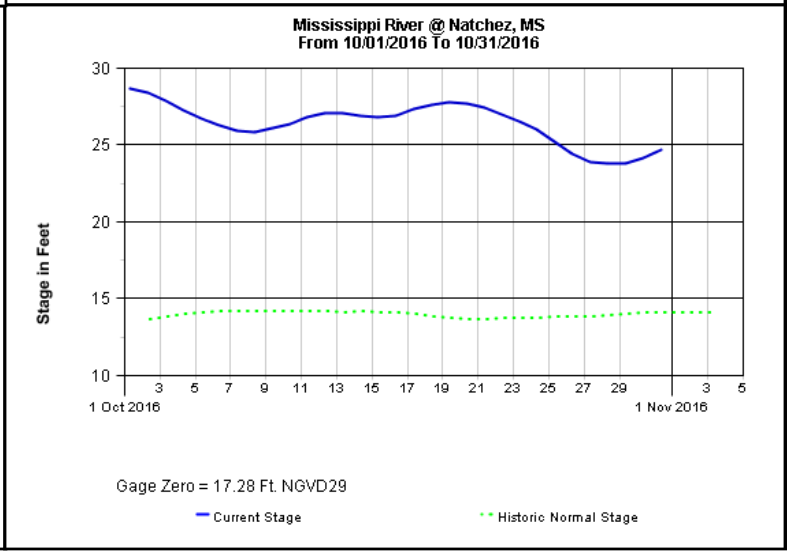
Pearl River System: Below Normal.
Yazoo River System: Below Normal.
Big Black River System: Below Normal.
Homochitto River System: Below Normal.
Pascagoula River System: Below Normal.
Northeast LA and Southeast AR: Below Normal.
Tombigbee River System: Below Normal.
Mississippi River: Below Normal.

Mississippi River Plots October 2016
Plots Courtesy of the United States Army Corps of Engineers







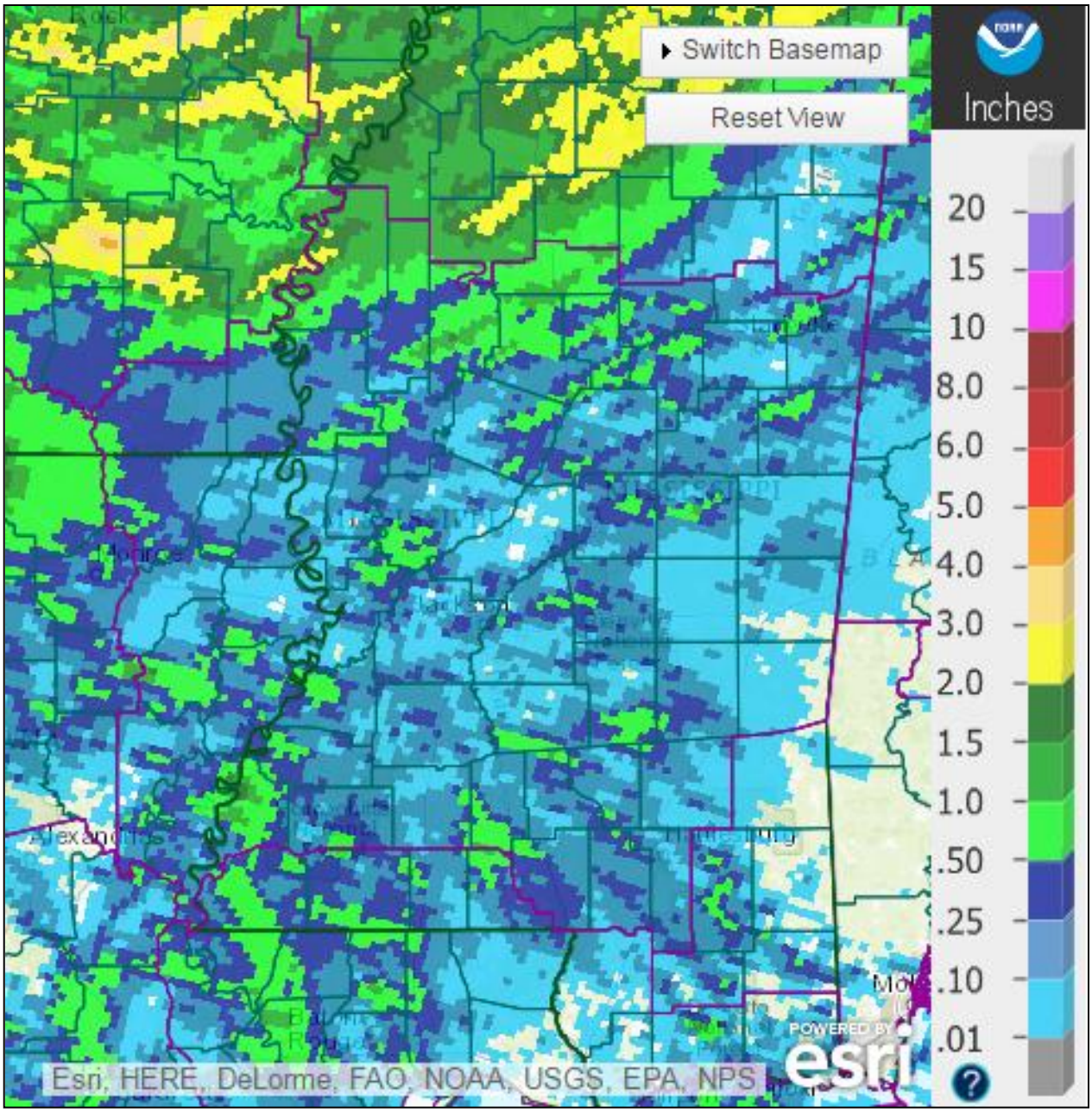


Location	Flood Stage (ft)	High Stage (ft)	Date	Low Stage (ft)	Date
Arkansas City	37	14.46	10/17	10.27	10/25
Greenville	48	25.45	10/17	20.78	10/25
Vicksburg	43	20.64	10/01	15.87	10/27
Natchez	48	28.64	10/01	23.77	10/28

Rainfall for the Month of October

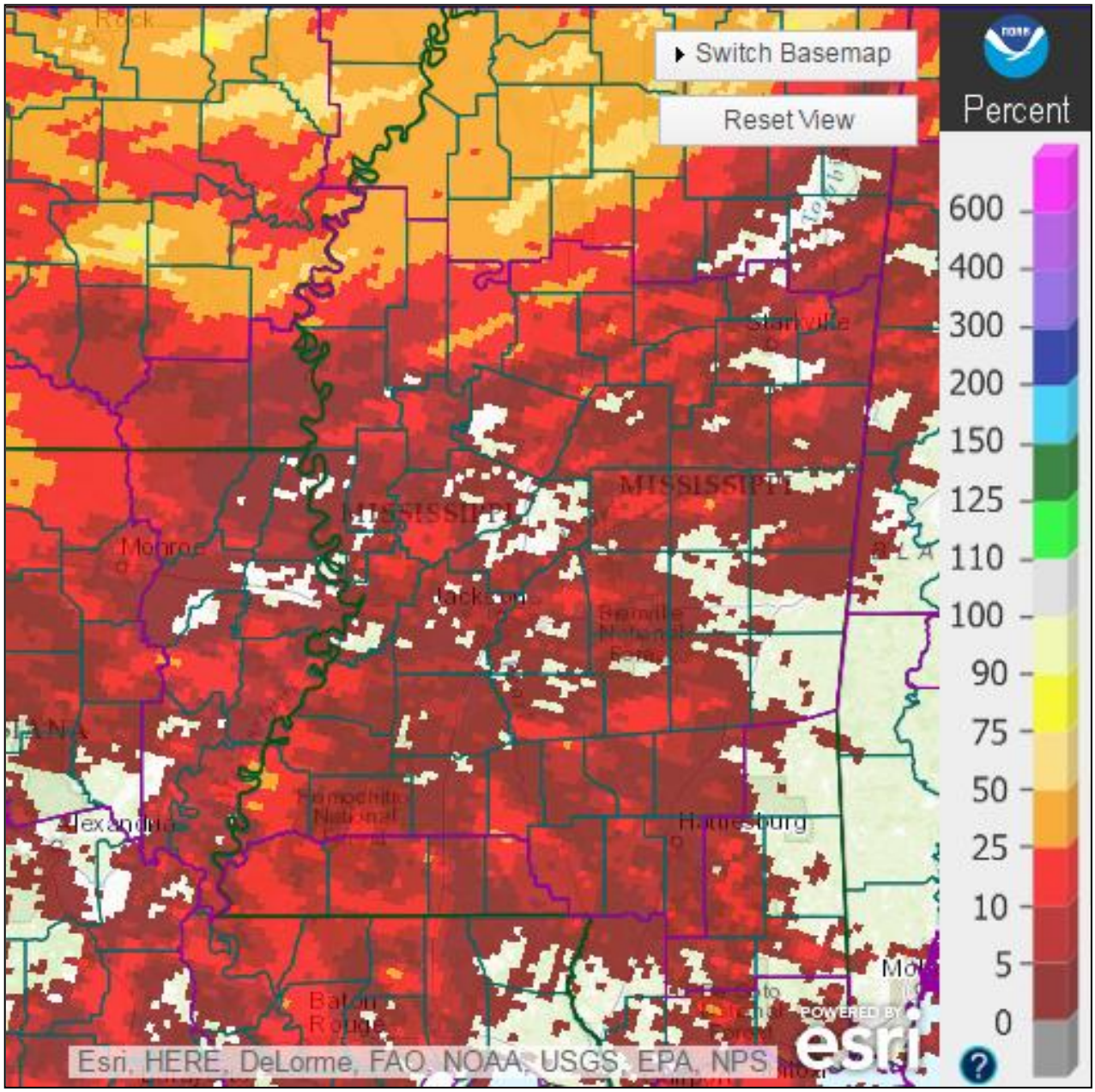
During the period from 7 am September 30th until 7 am October 31st, the largest rainfall amounts from NWS Cooperative Observers were:
This will be updated at a later time

October Rainfall Estimates:



Note: Observer rainfall and MPE in October may differ due to time differences.

October Percent of Normal Precipitation:



Note: Observer rainfall and MPE in October may differ due to time differences.

October Rainfall for Selected Cities:

City (Airport)	Rainfall	Departure from Normal	2016 Rainfall	2016 Departure from Normal
Jackson (KJAN)	0.49	-3.43	54.02	+9.79
Meridian (KMEI)	T	-3.76	37.90	-8.25
Hattiesburg (KHBG)	0.10	-3.65	55.20	+5.21
Vicksburg (KTVR)	T	-4.67	51.67	+7.54
Greenville (KGLH)	0.20	-4.12	42.77	+0.81
Greenwood (KGWO)	0.82	-3.05	39.20	-2.40

Total Flood Warning products issued: 0
Total Flood Statement products issued: 0
Total Flood Advisories MS River: 0
Daily Climate and Ag WX Products (AGO'S) issued: 31
Daily CoCoRaHS Rainfall Products (LCO'S) issued: 31
Daily River and Lake Summary Products (RVD'S) issued: 31

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Note: Provisional stage and precipitation data were furnished with the cooperation of the Mississippi, Louisiana, and Arkansas National Weather Service Cooperative Observer Programs, United States Geological Survey (USGS), United States Army Corps of Engineers (USACE), Pearl River Valley Water Supply District (PRVWSD), Pat Harrison Waterway District, Pearl River Basin Development District, and the Mississippi Department of Environmental Quality.

cc: USGS Little Rock District
USGS Ruston District
USACE Mobile District
USACE Vicksburg District
USACE Mississippi Valley Division
USGS Mississippi District
SRH Climate, Weather and Water Division
Lower Mississippi River Forecast Center
Pearl River Valley Water Supply District
Hydrologic Information Center
Southern Region Climate Center
Pat Harrison Waterway District
Pearl River Basin Development District